

#### ABSTRACT

A method for detecting changes in gene expression level in cells induced by treating the cells with a specific compound, the method comprising isolating mRNA from cells treated with the above compound and mRNA from untreated cells (control) and comparing the constitutions of these mRNAs. In this method, a difference in the amount of cDNA hybridized with a specific probe can be measured by labeling cDNAs obtained from the isolated mRNAs with different 5 fluorescent labels, mixing these cDNAs at a definite ratio and hybridizing them with the probe. This method enables screening a gene whose expression in cells is changed by treating the cells with a specific compound or to screen a compound capable of changing the 10 expression level of a specific gene.